

# New Frontiers Program

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**EPO and Student Collaboration**  
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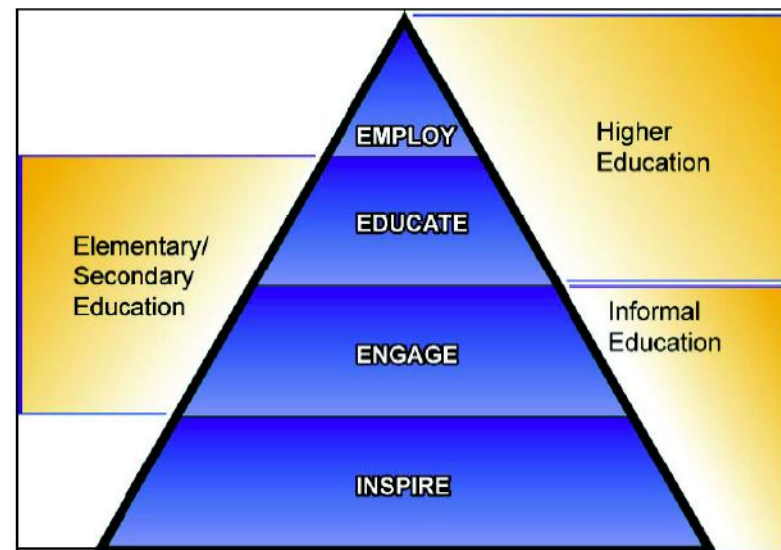
The NASA Science Mission Directorate's vision for Education and Public Outreach is:

*To share the story, the science, and the adventure of NASA's scientific explorations of our home planet, the solar system, and the universe beyond, through stimulating and informative activities and experiences created by experts, delivered effectively and efficiently to learners of many backgrounds via proven conduits, thus providing a return on the public's investment in NASA's scientific research.*



## NASA Education Outcomes

- **Higher Education** – Employ and Educate: Contribute to the development of the STEM (Science, Technology, Engineering, Mathematics) workforce in disciplines needed to achieve NASA's strategic goals, through a portfolio of investments.
- **Elementary and Secondary Education** – Educate and Engage: Attract and retain students in STEM disciplines through a progression of educational opportunities for students, teachers and faculty
- **Informal Education** – Engage and Inspire: Build strategic linkages between STEM formal and informal education providers that promote STEM literacy and awareness of NASA's mission.



## SMD Outreach Goal

Stimulate interest in science, engineering, and technology relevant to NASA SMD. Outreach can be directed at any audience including students, teachers, citizen scientists, and the general public.

- **New guidelines for E/PO with this AO**
  - No E/PO Plan **required or permitted** for Step 1 proposal
  - Plan for Core E/PO to be developed during Phase A study
  - Missions must designate at **least 1%** of the PI-Managed Mission Cost for implementation of the core E/PO program. There is no maximum allowable cost.
- **Requirements**
  - Proposals shall not designate an E/PO lead and proposals shall not include a plan for a core E/PO program.
  - Proposals shall identify the funding set aside for the implementation of a core E/PO program; this funding shall be at least 1% of the PI-Managed Mission Cost and shall be included in the PI-Managed Mission Cost.
  - Proposals shall include the following statement of commitment from the PI:  

“I understand the NASA SMD requirements for E/PO and I am committed to carrying out a core E/PO program that meets the goals described in the document *Education and Public Outreach Policies for AOs*. I will submit an E/PO plan with my Concept Study Report if this proposal is selected.”

## Requirements:

- If a proposal contains a SC, the proposal shall demonstrate that the proposed **SC is clearly separable** from the proposed Baseline and Threshold Science Mission investigations, to the extent that the SC will not impact the science investigation in the event that the SC is not funded, that the SC fails during flight operations, or that the SC encounters technical, schedule, or cost problems during development
- If a proposal contains a SC, the proposal shall identify the funding set aside for the SC; this funding may be outside the PI-Managed Mission Cost up to a maximum of 1% of the PI-Managed Mission Cost cap, and any SC costs beyond 1% of the PI-Managed Mission Cost cap shall be within the PI-Managed Mission Cost.

# Student Collaboration (optional)

- Proposals may define a Student Collaboration (SC) that is a separate part of the proposed investigation.
- The SC must be incorporated into the mission on a **nonimpact basis**
- The SC must be dependent upon the proposed mission being implemented, e.g., **require the provision of flight elements and/or access to science/engineering data generated by the mission**
- The SC must include appropriate plans for the mentoring and oversight of students to maximize the opportunity for teaching, learning, and success in contributing to the mission.
- Examples of Student Collaboration
  - Instrument development
  - Investigation of scientific question
  - Analysis and display of data
  - Development of supporting hardware or software

- Although any proposed SC is an E/PO element, a SC may not be used as a component of the core E/PO program
- There is no minimum or maximum cost for the SC
- The proposed cost of the SC, up to 1% of the PI-Managed Mission Cost cap, **may be outside of the PI-Managed Mission Cost**. If the SC costs more than 1% of the PI-Managed Mission Cost cap, then the rest of the cost of the SC must be within the PI-Managed Mission Cost.
- For Step 1 evaluation, a proposed SC will be evaluated only for its impact on mission feasibility to the extent that **they are not separable**. They will not be evaluated for merit in Step 1.
- SC proposals will not be penalized in Step 1 for any inherent higher cost, schedule, or technical risk, as long as the student collaboration is shown to be clearly separable from the implementation of the baseline mission.

For more information about the SMD E/PO and Student Collaboration visit:

<http://nasascience.nasa.gov/researchers/education-public-outreach/explanatory-guide-to-smd-e-po-evaluation-factors>

For Mission E/PO use the **Explanatory Guide to SMD E/PO Evaluation Factors, Version 3**

For Student Collaboration use the **Explanatory Guide to the NASA Science Mission Directorate Educational Merit Evaluation Factors for Student Collaboration Elements, Version 1.1**